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IS 6175-6 (1992): Screwing Taps, Part 6: Screwing Taps for Pipe Threads Parallel G Series [PGD 32: Cutting tools]

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भाग 6 'जी' शूंखला वालो समानान्तर पाइप-चूँड़ियों के लिए पेंचवाली
चूँड़ियाँ काटने के औजार — विशिष्ट

Indian Standard

SCREWING TAPS

**PART 6 SCREWING TAPS FOR PIPE THREADS PARALLEL
G SERIES — SPECIFICATION**

UDC 621.993 : 621.882.082.22

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Thread Cutting Taps and Dies Sectional Committee had been approved by the Production Engineering Division Council.

This standard for hand screwing taps for G and R_p series threads was covered in IS 6172 : 1971 'Specification for hand taps for pipe threads parallel'. First revision of IS 6172 was brought out in 1979 to bring in line of ISO 5969 : 1979 'Ground thread taps for pipe threads G series and R_p series — Tolerances on threaded portion'. In the present following changes have been made:

- IS 6172 has been split into IS 6175 Part 6 and Part 7 to contain G series and R_p series thread screwing taps respectively.
- All product standards on screwing taps have been brought under parts of an Indian Standard (IS 6175 Parts 1 to 8).
- The dimensions for threaded portion of the taps have been deleted and now covered in IS 6173 (Part 2) : 1991 'Screwing taps — Dimensions and tolerances of threaded portion: Part 2 For pipe screw threads G, R_p and R_e series'.
- The size G 1 $\frac{1}{8}$, 2 $\frac{1}{4}$ have been added in order to include all the sizes covered in IS 2643 (Parts 1 to 3) : 1975 up to G 4 size.

This standard is in full conformity with ISO 2284 : 1987 'Hand taps for pipe threads for parallel and taper threads — General dimensions and marking' issued by the International Organization for Standardization (ISO).

The other Indian Standards on screwing taps of this series are:

IS 6175 (Part 1) : 1991	Screwing taps: Part 1 Hand and short machine screwing taps for ISO metric screw threads sizes M 1 to M 2.5 — Specification (<i>second revision</i>)
IS 6175 (Part 2) : 1991	Screwing taps: Part 2 Hand and short machine screwing taps for ISO metric screw threads sizes M 3 to M 10 — Specification (<i>second revision</i>)
IS 6175 (Part 3) : 1991	Screwing taps: Part 3 Hand and short machine screwing taps for ISO metric screw threads size M 3 to M 68 with coarse pitches and M 3 to M 100 with fine pitches — Specification (<i>second revision</i>)
IS 6175 (Part 4) : 1991	Screwing taps: Part 4 Long shank machine screwing taps for ISO metric screw threads sizes M 3 to M 24 — Specification (superseding IS 7821)
IS 6175 (Part 5) : 1991	Screwing taps: Part 5 Nut screwing taps for ISO metric screw threads sizes M 3 to M 68 with coarse pitches — Specification (superseding IS 6174)
IS 6175 (Part 7) : 1992	Screwing taps: Part 7 Screwng taps for pipe threads parallel R _p series — Specification (superseding IS 6172)
IS 6175 (Part 8) : 1991	Screwing taps: Part 8 Screwng taps for pipe threads taper R _e series — Specification (superseding IS 7796).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SCREWING TAPS

PART 6 SCREWING TAPS FOR PIPE THREADS PARALLEL G SERIES — SPECIFICATION

1 SCOPE

This standard covers the dimensions and requirements for screwing taps for parallel pipe threads of G series conforming to IS 2643 (Parts 1 to 3) : 1975 in size range G 1/16 to G 4 with relieved shank. This may be used as a hand screwing tap as well as a machine screwing tap.

IS No.	Title
2643	Dimensions for pipe threads for fastening purposes :
2643 (Part 1) : 1975	Part 1 Basic profile and dimensions
2643 (Part 2) : 1975	Part 2 Tolerances
2643 (Part 3) : 1975	Part 3 Limits of sizes (first revision)

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	Title
6171 : 1991	Screwing taps — Technical supply conditions
6173	Screwing taps dimensions
(Part 2) : 1991	and tolerances on threaded portion of screwing taps: Part 2 For G, R _p and R _c series threads.

3 GENERAL DIMENSIONS

Dimensions of screwing taps for pipe threads parallel 'G' series shall be as given in Table 1.

4 TOLERANCES

4.1 Tolerances on overall length and radial run-out shall be according to IS 6171 : 1991.

4.2 Dimensions and tolerances on threaded portion of screwing taps shall be according to IS 6173 (Part 2) : 1991.

5 MATERIAL

The material of screwing tap shall be as given in 4 of IS 6171 : 1991.

6 HARDNESS

The hardness of screwing tap shall be as given in 5 of IS 6171 : 1991.

7 GENERAL REQUIREMENTS

7.1 The number of flutes shall be as given below:

Diameter		No. of Flutes
From	To	
G 1/16	G 1/4	3 or 4
G 3/8	G 2	4 or 6
G 2 $\frac{1}{2}$	G 2 $\frac{3}{4}$	6 or 8
G 3	G 4	8 or 10

7.2 For requirements not covered in this standard, it shall conform to the requirements of IS 6171 : 1991.

8 DESIGNATION

8.1 Screwng taps shall be designated by the name, nominal size, number of this standard and material from which it is made.

8.2 A hand screwing tap of size G 1/2 conforming to this standard and made from high speed steel (HSS) shall be designated as:

Example:

Set of 2 taps — Screwng tap set IS 6175 (Part 6) G 1/2 HSS

Taper tap — Screwng tap taper IS 6175 (Part 6) G 1/2 HSS

Bottoming tap — Screwng tap bottoming IS 6175 (Part 6) G 1/2 HSS

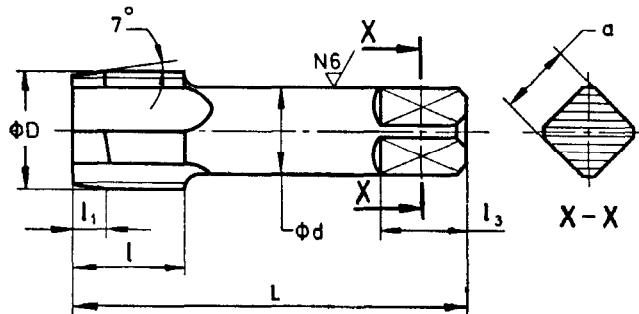
9 MARKING

9.1 Screwng taps shall be marked with appropriate information as per 10 of IS 6171 : 1991.

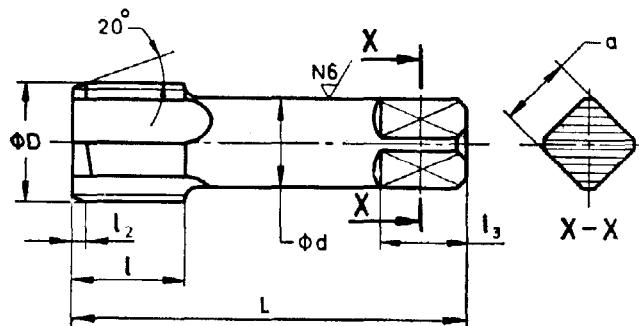
Table 1 Dimensions for Screwing Taps for Pipe Threads Parallel 'G' Series
 (Clause 3.1)

All dimensions in millimetres.

N9/ (N6/)



TAPER TAP



BOTTOMING TAP

Designation	Nominal Dia <i>D</i>	Pitch	<i>d</i> h9	<i>l</i> +2 -1	<i>l</i> ₁	<i>l</i> ₂	<i>L</i>	Square	
								<i>a</i> h11	<i>l</i> ₃
G1/16	7.723	0.907	5.6	14	4.1	1.6	52	4.5	7
G1/8	9.728	0.907	8.0	15	4.1	1.6	59	6.3	9
G1/4	13.157	1.337	10.0	19	6.2	2.4	67	8.0	11
G3/8	16.662	1.337	12.5	21	6.2	2.4	75	10.0	13
G1 2	20.955	1.814	16.0	26	8.5	3.2	87	12.5	16
G5/8	22.911	1.814	18.0	26	8.5	3.2	91	14.0	18
G3/4	26.441	1.814	20.0	28	8.5	3.2	96	16.0	20
G7/8	30.201	1.814	22.4	29	8.5	3.2	102	18.0	22
G1	33.249	2.309	25.0	33	10.5	4.0	109	20.0	24
G1-1/8	37.897	2.309	28.0	34	10.5	4.0	116	22.4	26
G1-1/4	41.910	2.309	31.5	36	10.5	4.0	119	25.0	28
G1-1/2	47.803	2.309	35.5	37	10.5	4.0	125	28.0	31
G1-3/4	53.746	2.309	35.5	39	10.5	4.0	132	28.0	31
G2	59.614	2.309	40.0	41	10.5	4.0	140	31.5	34
G2-1/4	65.710	2.309	40.0	42	10.5	4.0	142	31.5	34
G2-1/2	75.184	2.309	45.0	45	10.5	4.0	153	35.5	38
G2-3/4	81.534	2.309	50.0	46	10.5	4.0	160	40.0	42
G3	87.884	2.309	50.0	48	10.5	4.0	164	40.0	42
G3-1/2	100.330	2.309	63.0	50	10.5	4.0	173	50.0	51
G4	113.030	2.309	71.0	53	10.5	4.0	185	56.0	56

NOTE — The figures are indicative of dimensions only and do not specify design features.

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AMENDMENT NO. 1 MAY 1996
TO
IS 6175 (Part 6) : 1992 SCREWING TAPS
PART 6 SCREWING TAPS FOR PIPE THREADS
PARALLEL G SERIES — SPECIFICATION

Typographical errors have crept in the text of this standard as far as 'year of printing' is concerned. Year of printing shall be read as '1992' in place of '1991' in the text of the following Indian Standards wherever it appears:

IS 6171, IS 6173 (Part 2) and IS 6175 (Parts 1 to 3 and Part 8).

(PE 10)